IN THE CLAIMS

Please replace any previous listing of the claims with the following replacement listing of the claims:

Replacement Listing of the Claims

1. (Currently amended) A decoding power aware encoding method <u>that is executable in an encoding system, said method comprising:</u>

_____ for generating a predictively encoded data stream, in which predictions, that result in a reduction in the amount of reference data transferred from a secondary memory to a primary memory <u>of a decoder</u> during a decoding process, are favored, <u>wherein said generating step comprises</u> said method for favoring certain predictions comprising:

    (a) providing a primary memory model that emulates an operation of transferring and keeping a part of said reference data from said <u>decoder</u> secondary memory to said <u>decoder</u> primary memory in the decoding process;

    (b) finding at least one candidate that is a match between a current block of an input data sequence and said reference data located in said primary memory model;

    (c) assigning quality and rate measures to each said candidate; and

    (d) based on said assigned measures, choosing a particular one of the candidates to reduce <u>accesses to</u> said <u>decoder</u> secondary memory<u>, thereby achieving said reduction in the amount of reference data transferred from said decoder secondary memory</u> accesses of said decoder.

2-7. (Cancelled)

8. (Previously presented) A system for encoding an input bit frame comprising:

    (a) a primary memory model that emulates an operation of a primary memory in a decoder and that stores a part of previously used reference data according to a decoding process ;

    (b) a motion estimator that receives a current block of an input video data sequence to be encoded and searches said primary memory model to find at least one candidate as a match between said current block and said reference data;

    (c) said primary memory model being coupled to said motion estimator;

    (d) a motion vector selector that is coupled to an output of the motion estimator and that chooses said candidate as a predictor of said current block accordingly; and

    (e) a quality and rate controller that provides quality and rate measures for each candidate to the motion vector selector.

9. (Currently amended) A system for encoding a data frame as defined in claim 8, further comprising a motion vectors module for determining the motion vectors based on a current block and said best-match.

10. (Cancelled)

11. (Previously presented) The method of claim 1, wherein said choosing step chooses said candidate if a difference between said current block and said candidate is less than a first quality and rate measure.

12. (Currently amended) The method of claim 11, wherein if said ~~candidate~~ difference is greater than said first quality and rate measure, said finding step further searches a second memory, which stores reference data without regard for said decoding process, for at least one other candidate that is a match with said current block, and wherein said choosing step chooses said other candidate if a total difference between said current block and said other candidate is less than a total difference between said current block and said candidate found in said primary memory by more than a second quality and rate measure.

13. (Previously presented) The system of claim 8, wherein said motion vector selector chooses said candidate if a difference between said input block and said candidate is less than a first quality and rate measure.

14. (Currently amended) The system of claim 13, wherein if said ~~candidate~~ difference is greater than said first quality and rate measure, said motion estimator searches a second memory, which stores reference data without regard for said decoding process, for a second match with said current block, and wherein said motion vector selector chooses said other candidate if a total difference between said input block and said other candidate is less than a total difference between the input block and the candidate found in said primary memory by more than a second quality and rate measure.